




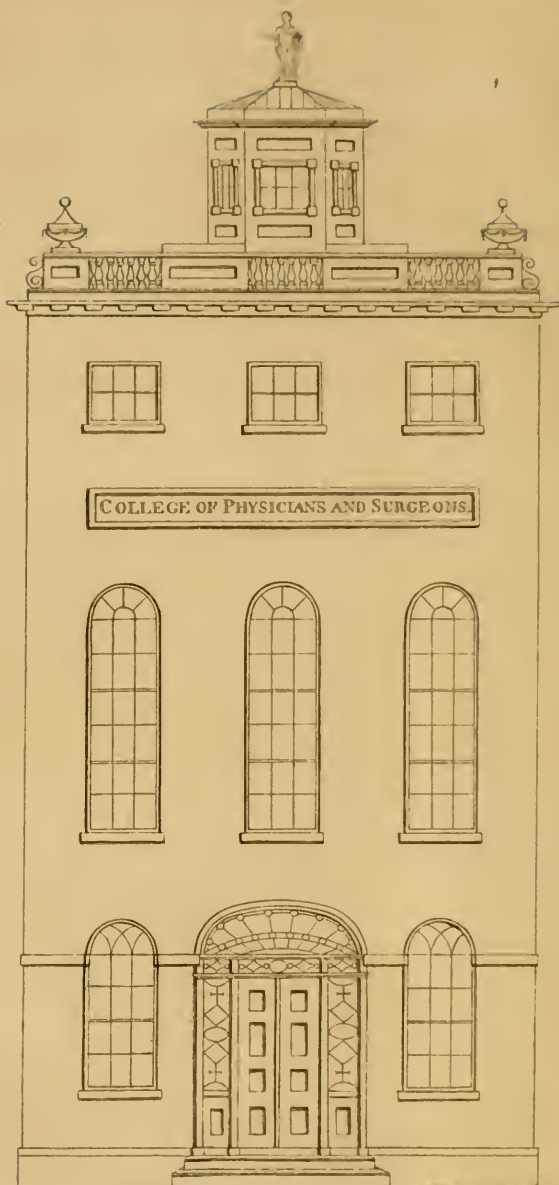
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*College of Physicians and Surgeons of the University of the
STATE OF NEW-YORK.*

DOMESTIC INTELLIGENCE.

HISTORICAL SKETCH

*Of the ORIGIN, PROGRESS, and PRESENT STATE of the
COLLEGE of PHYSICIANS and SURGEONS of the UNIVERSITY,
NEW-YORK.*

(With a View of the College.)

THE first attempt towards the formation of a medical school in the state of New-York was made in the year 1767, during the administration of His Excellency Sir HENRY MOORE and Lieutenant Governor CADWALLADER COLDEN.* Previous to this period, however, instruction had been afforded to the youth engaged in the study of medicine in New-York, and the first† essay in the United States, for the purpose of imparting anatomical knowledge, was made by Doctors JOHN BARD‡ and PETER MIDDLETON,§ two of the

* The name of Cadwallader Colden is memorable in the provincial annals of this country; and, not the least so, from the many charters of incorporation granted during his time for the establishment of literary and benevolent institutions. Himself an ardent and successful cultivator of science, he seems to have lost no opportunity for promoting its interests in the colonies. See Life of Colden, in American Medical and Philosophical Register, vol. i. p. 297—306.

† Hosack's Sketch of the Origin and Progress of the Medical Schools of New-York and Philadelphia, in Amer. Med. and Phil. Reg. vol. ii. p. 228.

‡ Dr. John Bard was born in Burlington, in New-Jersey, February, 1716, and died at his residence, Hyde Park, near Poughkeepsie, in 1799. He practised his profession in the city of New-York with great honour, and the most distinguished success, for more than fifty years, and was the author of an interesting account of the malignant pleurisy, which prevailed at Huntington, Long-Island, in the year 1749, besides some other papers. For further particulars, see a Sketch of his Life and Character, in the Amer. Med. and Phil. Reg. vol. i. p. 61—67.

§ Dr. Middleton was one of the very few medical men of this country, who, at that early day, were distinguished equally for various and profound learning, and

most distinguished practitioners of this city. In the following year, 1768, the Medical School was organized, under the direction and government of the College of the province, then called King's College, and a body of professors appointed to teach the several branches of medical science.

The learning and abilities united in the Medical School of that day, were, in the highest degree, honourable to the institution with which they were connected. Dr. SAMUEL CLOSSY* was chosen the Professor of *Anatomy*; Dr. JOHN JONES,† Professor of *Surgery*; Dr. PETER MIDDLETON, Professor of *Physiology and Pathology*; Dr. JAMES SMITH,‡ Professor of *Chemistry and Materia Medica*; Dr. JOHN V. B. TENNENT, Professor of *Midwifery*; and Dr.

great professional talents. His *Medical Discourse*, or Historical Inquiry into the ancient and present state of Medicine, the substance of which was delivered at opening the Medical School of New-York, published in 1769, is an honourable specimen of his talents and attainments. He also wrote a letter on the Croup, addressed to Dr. Richard Bayley, a copy of which may be seen in the Medical Repository, vol. xiv.

* Dr. Samuel Clossy had, previous to his arrival in America, from Ireland, where he was born, attained a high degree of eminence in the medical profession, both as a practitioner, and as the author of an interesting volume on Morbid Anatomy, entitled, "Observations on some of the Diseases of the Human Body; chiefly taken from the Dissections of Morbid Bodies," published in London. 8vo, 1763. He was also a short time before chosen to the anatomical chair, the professor of natural philosophy in King's College. See the Life of Rev. Dr. Cooper, second President of King's College, in the Amer. Med. and Phil. Reg. vol. iii. p. 298—301.

† Dr. Jones was a native of the state of New-York, and born at Jamaica, Long Island, in 1729. He commenced the study of medicine in Philadelphia, and completed his education in Europe, where he attended the lectures of Hunter, M'Kenzie, and Pott, of London, and M. Petit and M. Le Dran, of Paris. He was deservedly considered an able teacher, and extended his reputation by the publication of a volume, entitled, "*Plain Remarks on Wounds and Fractures*," which appeared in 1775. He died in April, 1790, after a most useful and honourable life devoted to the advancement of his profession. See an Account of the Life of John Jones, M. D. in the Amer. Med. and Phil. Reg. vol. iii. p. 325—330.

‡ The brother of William Smith, Esq. the historian of New-York. He died in the city of New-York, in 1812.

SAMUEL BARD,* Professor of the *Theory and Practice of Physic*. Lectures on these several branches of medicine were regularly delivered by the above-mentioned gentlemen, and the Degree of Doctor of Medicine conferred by the College.†

About the same time, in consequence of a public address delivered by Dr. SAMUEL BARD, at the medical graduation, in 1769, a very important addition was made to the means of medical education then afforded by the establishment of the New-York Hospital. The necessity and usefulness of a public infirmary, to use the language of Dr. MIDDLETON,‡ “were so warmly and pathetically set forth in that memorable discourse,” that, upon the same day on which it was delivered, a subscription was commenced by His Excellency Sir HENRY MOORE, and the sum of eight hundred pounds sterling collected for that establishment. The corporation of the city, animated by the same public spirit and active benevolence, in a short time added three thousand pounds sterling to the first subscription, when the united amount was employed in laying the foundation of that valuable institution, now the pride of our city, and alike devoted to the purposes of humanity and the promotion of medical science.§

The Medical School of New-York, thus provided with learned and able professors, promised to be productive of the greatest advantages; but the revolutionary war occasioned a suspension of their labours; the professors and students

* The present President of the College of Physicians and Surgeons, New-York.

† In his valuable Retrospect of the Eighteenth Century, Dr. Miller asserts, that no medical degrees had been conferred by the College previous to the revolutionary war. Notwithstanding the general accuracy of Dr. Miller, he, in this instance, is mistaken. A copy of an Inaugural Dissertation on the anthelmintic quality of the *Phaseolus Zaratensis Siliqua hirsuta*, or Cow-Itch, for the Medical Doctorate in King's College, by Samuel Kissam, M. B. and published in May, 1771, may be seen in the library of the New-York Historical Society.

‡ Medical Discourse, p. 60.

Hosack's Sketch.

were scattered, the college converted by the enemy into a military hospital, and the immediate design of the whole establishment frustrated.

After the peace of 1783, the former medical professors being separated by accident or death, never as a body were reinstated in their former situation in the College. In the following year, exertions were made for the revival of the Medical School of this city, and professorships created for that purpose. The individuals, however, who were appointed, either declined giving instruction altogether, or gave but imperfect courses, and the establishment consequently fell to the ground.

King's College at the close of the war underwent considerable alterations in its government, and received the name of Columbia College. WILLIAM SAMUEL JOHNSON, Esq. LL. D. son of the first president, and a gentleman in every respect qualified to the station, was called to preside over it. The reputation of the College, as a school of arts, soon became deservedly great, and the Board of Trustees, under whose more immediate care it was placed, laudably attempted, in the year 1792, again to connect a medical establishment with it; thus forming two faculties, a faculty of arts and another of physic. At the head of the latter presided, for some time, SAMUEL BARD, M. D. as Dean. Among the professors who were appointed to deliver lectures on the different branches of medicine were several gentlemen of acknowledged talents and professional merit, and it was ardently hoped that the interests of science in general would be greatly promoted by their labours, and the medical character of the state soon acquire a high and extensive reputation.

The exertions of the Trustees of Columbia College in thus annexing a Medical School to that institution, were certainly in the highest degree deserving commendation; and

though the beneficial effects resulting from them have been but small and limited, and fallen far short of what was at first anticipated, yet it would be wanting in liberality to deny, that some service had been rendered the profession of medicine by its establishment. It appears from the records of Columbia College, that since 1792, the time when the medical faculty of that school was organized, to the year 1811, *thirty-four* students have completed their courses of study, and received the medical honours of that institution!

For reasons too obvious to need mention in this place, the Honourable the Regents of the University of New-York, in whom resides the exclusive power of instituting seminaries of learning, and of superintending the interests of literature and science throughout the state, determined in 1807 upon the establishment of a COLLEGE OF PHYSICIANS AND SURGEONS. The power to exercise this authority had been vested in them as early as 1791, by an act passed for that special purpose.* That so many years elapsed before that venerable body thought fit to form an institution to be exclusively devoted to the cultivation of medical science, appears to have risen from the existence of the Medical School attached to Columbia College, which it was hoped would have superseded the necessity of another medical establishment. Accordingly a charter for the purpose of establishing a College of Physicians and Surgeons in the city of New-York was granted, bearing date the 12th of March, 1807.

The establishment of the College of Physicians and Surgeons upon a broad foundation, under the patronage of the Regents of the University, and its sanction by the legislature, were circumstances viewed with the greatest satisfac-

* The title of the act is as follows: "An Act to enable the Regents of the University to establish a College of Physicians and Surgeons within this state," passed the 24th March, 1791.

tion, and afforded just cause of congratulation to the friends of science throughout the state. That the high expectations which were entertained of the benefits that would flow to the community from its establishment were well founded, the history of the College during the few years it has been in operation presents the most conclusive evidence.

Agreeably to the provision made by the Charter, the College was organized on the first Tuesday, the 5th, of May, 1807 ; when the following officers were elected :

NICHOLAS ROMAYNE, M. D. *President.*

SAMUEL L. MITCHILL, M. D. *Vice President.*

ARCHIBALD BRUCE, M. D. *Registrar.*

ABRAHAM BROWER, Physician, *Treasurer.*

CENSORS.

EDWARD MILLER, M. D. DAVID HOSACK, M. D. ALEXANDER SHELDON, WILLIAM LIVINGSTON, WILLIAM JAMES McNEVEN, M. D. HENRY VAN SOLINGEN, M. D. WILLIAM WHEELER, J. D. GILLESPIE, J. E. R. BIRCH, JAMES G. GRAHAM, BENJAMIN DE WITT, M. D. FELIX PASCALIS, and ALEXANDER HOSACK, M. D.

The following Professorships and Professors were constituted and appointed by the Regents of the University :

Practice of Physic, EDWARD MILLER, M. D.

Chemistry, SAMUEL L. MITCHILL, M. D.

Botany and Materia Medica, DAVID HOSACK, M. D.

Institutes of Medicine, BENJAMIN DE WITT, M. D.

For the purpose of forming a complete system of instruction in the several branches of Medicine, the College deemed it necessary to exercise the power, delegated to them by charter, of appointing lecturers on those departments of science which were unprovided with professors. They accordingly appointed Dr. NICHOLAS ROMAYNE and Dr. JOHN

AUGUSTINE SMITH, Lecturers on *Anatomy*, Dr. BENJAMIN DE WITT, Lecturer on *Chemistry*,* Dr. DAVID HOSACK, Lecturer on *Surgery* and *Midwifery*, and Dr. EDWARD MILLER, Lecturer on *Clinical Medicine*.

In order to conduct with greater facility the various minute details of business in the College, a *Senatus Academicus* was organized, consisting of the President, Vice President, Professors, Lecturers, Registrar, and Treasurer.

The College, thus provided with Professors and Lecturers on all the branches of medical science, procured a commodious building situated in Robinson-street, a central part of the city, where apartments were fitted up for the accommodation both of the teachers and students. Some progress was made in the formation of an Anatomical Museum, a Chemical Laboratory, and a Cabinet of Minerals. The Botanic Garden founded by Dr. HOSACK, the Professor of Botany and Materia Medica, was also eminently calculated for the purpose of instruction in those departments of knowledge

On the 7th of November following, the business of the College commenced, and full and satisfactory courses of instruction were delivered on all the branches of medicine, by the united labours of the professors appointed by the Regents of the University, and the Lecturers chosen by the College. In addition to this, it is proper to mention, that the Governors of the New-York Hospital made such arrangements with the Professor of the Practice of Physic as enabled him to deliver a course of Clinical Lectures in that extensive charity; and that Dr. McNEVEN, a member of the College, and then one of the Physicians of the New-York Alms House, gave to the students of medicine a course of

* In the absence of Dr. Mitchill, the professor of this branch, who had to attend during that session at the general government as Senator of the United States.

Clinical Instruction on the cases that occurred in that institution. The industry with which the teachers of the New School devoted themselves to their respective collegiate duties was unremitted; and the ability and success with which they fulfilled the important stations assigned them was such, that the legislature, at their next session, in November 1808, made the liberal appropriation of twenty thousand dollars for the benefit of the College. The whole number of students who resorted to the institution the first year was fifty-three.

The College being instituted on an extensive plan, and under the immediate superintendence of the Regents of the University and the patronage of the state, the liberal grant of the legislature enabled them to purchase a building, situated in Pearl-street, better accommodated for their purpose, and to make such additions to the institution as might increase the advantages of instruction in the various branches of Medical Science. During the recess of the College, Dr. SMITH, formerly Lecturer, was appointed Professor of *Anatomy and Surgery*, Dr. MITCHILL, Professor of *Natural History*, Dr. DE WITT, Professor of *Chemistry*, Dr. M'NEVEN, Professor of *Obstetrics and the Diseases of Women and Children*, and the President, Professor of the *Institutes of Medicine*.

The second session of the College commenced in November, 1808, and continued four months. The Lectures were attended by *seventy-two* students, a greater number than had ever before resorted to a similar institution for medical instruction in this city.

The principal improvements made in the College the ensuing year, related to the departments of *Anatomy and Natural History*. The Anatomical Museum was considerably enlarged by many valuable preparations, and the Cabinet of *Natural History and Mineralogy* received many additions illus-

trative of the geological constitution and mineralogical resources of the United States. Dr. A. BRUCE was elected the Professor of *Materia Medica* and *Mineralogy*. Lectures were given on all the branches of medical science by the several professors, and clinical practice at the Hospital by Dr. MILLER. The third session of the College was attended by seventy-three students from different parts of New-York, and from other states in the union.

The success of the College of Physicians and Surgeons during the first three years of their establishment, exceeded the most sanguine expectations, and gave the fullest evidence of the numerous advantages which the city of New-York possesses for a great medical school. Certain misunderstandings, however, having taken place between the president and the professors, the rapid progress of the College in its importance and usefulness received a temporary check, and its brilliant prospects were for a season overcast. From a want of unanimity among the professors, lectures on only some of the branches of medicine were delivered, and the pupils consequently were reduced to about one third the former number.

The Regents of the University, upon receiving information of the dissensions which had arisen in the College, and which it was feared would materially retard the advancement of the institution, with the same laudable zeal for the promotion of medical science with which they had originally organized the establishment, immediately adopted measures for ascertaining the cause of the mischief, and for the removal of every impediment to its prosperity. A committee, consisting of the honourable Chief Justice KENT, Judge SPENCER, and Judge SMITH, was appointed to inquire into the nature of the misunderstanding, and to report upon the same. The report was as follows :

At a meeting of the Regents of the University, held pursuant to adjournment, in the Senate Chamber, on the first of April, 1811 :

The committee to whom was referred several papers relative to the state of the College of Physicians and Surgeons in the city of New-York, report, that unfortunate misunderstandings have taken place between several professors of that institution, which have already materially impeded its operations, and unless something effectual be done by the regents, it will become degraded in the estimation of the public, and its usefulness will be inevitably destroyed.

The committee have forbore to trace and bring to light the conduct of individuals, because in their opinion it would be both useless and invidious.

Propositions have been made to the committee to re-model the institution, with a view of rendering its operation more simple, and of introducing into it several of the Professors of the Medical School in Columbia College, and other eminent and distinguished individuals: this proposition has been viewed by the committee in the most favourable light, as it may extinguish the feuds existing among the present Professors of the College of Physicians and Surgeons, and as it will, in all probability, be the means of uniting the two schools.

The latter appears an object of the first importance, in as much as it will assemble, in one institution, a splendid collection of medical and surgical talents, and as it cannot fail to merit and receive the patronage and encouragement of the legislature.

It is unnecessary for the committee to attempt to display the important advantages to the state which a well organized Medical School in the city of New-York must afford; its hospital, and the subjects furnished by the state prison, without the violation of law, present a field for the acquisition of medical and surgical knowledge unrivalled in the United States, and it is only requisite to establish an institution, under the fostering care of the legislature, in which shall be united the best talents, and to secure these advantages to the state.

Under these impressions, the committee beg leave to report an alteration of the charter of the College of Physicians and Surgeons, and to propose a new list of officers and professors, which alteration is as follows, to wit :

*By the Regents of the University of the State of
New-York.*

WHEREAS we have reserved to ourselves the right to alter and modify our ordinances for establishing a College of Physicians and Surgeons in New-York ; therefore,

Be it ordained, That all the corporate rights, privileges, powers, and immunities granted by us to the said College of Physicians and Surgeons, to the Trustees or Members thereof, and to the Senatus Academicus and Censors thereof, shall hereafter be exclusively vested in, and exercised by the Trustees of the said College of Physicians and Surgeons, to be appointed from time to time by us or our successors. And the said Trustees shall do and perform all matters and things which the said College of Physicians and Surgeons, the Trustees or Members thereof, and the Senatus Academicus and Censors thereof, are authorized and required to do and perform.

And be it further ordained, That the President, Vice President, Professors, and Treasurer of the said College, for the time being, and such other persons as we, or our successors, may hereafter appoint, shall be the Trustees of the said College, provided the whole number of the said trustees shall not, at any time, be more than twenty-five.

And be it further ordained, That the President or Vice President, or any three of the Trustees, shall have power, at any time, to call a meeting of the said Trustees, by giving at least three days previous notice of the time and place of holding said meeting. And five of the said Trustees (of which the President, or in his absence, the Vice President, shall be one) shall be a quorum for the transaction of business.

And be it further ordained, That the Trustees and Members of the said College, who are not constituted Trustees by this supplementary charter, shall be hereafter fellows or members thereof, and

that the Trustees shall have power to elect fellows or members of the said college, who shall at all times have the privilege of attending all the public lectures and other courses of instruction, delivered by the Professors in the said College; and who shall also have the privilege of visiting and inspecting the Anatomical Museum, the Botanic Garden, the Cabinets of Mineralogy and Natural History, and the Library of the said College, under such regulations as the Trustees shall prescribe for that purpose.

And be it further ordained, That reserving to ourselves and our successors, Regents of the University, the power of making such other grants or ordinances as may be necessary or useful for the said College, we finally order, that this ordinance shall form part of the charter of the said College of Physicians and Surgeons in the city of New-York. And we do hereby revoke and annul such parts of our previous grants and ordinances as are contrary to, or inconsistent with, the present ordinance."

The above extracts from the proceeding of the Regents of the University, supersede the necessity of any remarks on the subject to which they relate. The changes proposed to be made both in the officers and in the government of the College, were such as manifested equally a regard to the rights of other establishments, and the solicitude of the Regents for the welfare of that which they had founded and cherished.

Though their laudable designs were for a while, in a partial degree, protracted, on account of the conduct of some gentlemen, in relation to the professorships with which they were honoured, yet such arrangements were adopted by the Board of Trustees, now created according to the new Charter, that the various courses of instruction delivered by the professors formed a complete system of medical education.

Upon the reorganization of the College, the following gentlemen accepted the stations to which they were elected on

the 1st of April, 1811, by the unanimous resolve of the Honourable the Regents of the University :

SAMUEL BARD, M. D. *President.*

BENJAMIN DE WITT, M. D. *Vice President.*

JOHN AUGUSTINE SMITH, *Professor of Anatomy, Surgery, and Physiology.*

DAVID HOSACK, M. D. *Professor of the Theory and Practice of Physic and Clinical Medicine.*

WILLIAM JAMES M'NEVEN, M. D. *Professor of Chemistry.*

SAMUEL L. MITCHELL, M. D. *Professor of Natural History.*

JOHN D. JAKES, *Treasurer.*

JOHN W. FRANCIS, *Registrar.*

During the same session, other measures particularly calculated to advance the interests of the New School of Medicine were adopted. The Elgin Botanic Garden, founded by Dr. Hosack, in the vicinity of this city, and which had been purchased by the legislature for the purpose of promoting medical science, was placed by them at the disposal of the Regents. That honourable board committed to the Trustees of the College of Physicians and Surgeons, the care of that extensive Botanical establishment, to be devoted to the use of the College, for the laudable purpose contemplated by the legislature. By this arrangement, the Botanic Garden became an important addition to the State Medical School, and affords more ample means of instruction in a highly interesting branch of education, than are enjoyed in any other Medical Seminary in the United States.* The le-

* The Elgin Botanic Garden is situated about three miles from the city, on the middle road between Bloomingdale and Kingsbridge. The ground, consisting of twenty acres, was purchased from the corporation of New-York, in 1801, by Dr. David Hosack, the founder of the establishment. The view, from the most elevated part, is variegated and extensive, and the soil itself of that di-

gislature also, during this session, made a further grant of five hundred dollars per annum for the benefit of the College.

The College having thus undergone such material alterations, and received such liberal aid from its founders and patrons, a new list of officers being chosen, and its internal government, formerly placed with the Censors and Senatus Academicus, being now vested in a board of Trustees composed of the President, Vice President, Professors, Treasurer, and other members of the medical profession, elected to the station, directed its attention with increased zeal to the immediate object of its establishment.

versified nature, as to be particularly adapted to the cultivation of a great variety of vegetable productions. Immediately after the purchase, the proprietor had the grounds cleared and arranged in a manner the best adapted to the different kinds of vegetable, and planted agreeably to the most approved stile of ornamental gardening. A conservatory for the more hardy green-house plants was also built. As a primary object in this establishment was to collect and cultivate the native plants of this country, especially such as possess medicinal properties, there were in cultivation at the commencement of 1805, near fifteen hundred species of American plants, beside a considerable number of rare and valuable exotics. In 1806, important additions were made to the collection of plants from various parts of Europe, and from the East and West Indies. A second building for their preservation was erected, and the foundation for a third laid, which was completed in the following year. In the autumn of 1806 a *Catalogue* of the plants which had been collected, and which amounted to nearly two thousand, was published. Since that time, the Botanic Garden has been greatly improved. The buildings, which are erected on the most recent plan adopted in institutions of this kind, consist of three large and well constructed houses, exhibiting a front of one hundred and eighty feet. The greater part of the ground is brought in a state of high cultivation, and divided into various compartments, calculated for the instruction of the student of Botany and Medicine. The establishment is surrounded by a belt of forest trees and shrubs, and these again are enclosed by a stone wall two and a half feet in thickness, and seven feet in height. Upon the purchase of the establishment by the legislature, in 1810, the founder of the garden published a second edition, greatly enlarged, of the *Catalogue of Plants cultivated there*, arranged in alphabetical order, and embracing the generic and specific names of Linnæus, the synonyms of various authors, the popular appellations by which they are known, &c. For a more minute account, see a "*Statement of Facts relative to the establishment and progress of the Elgin Botanic Garden.*" *Hortus Elginensis, or a Catalogue of the Plants*, &c. second edition, published in 1811.

The services rendered the College, by the late measures adopted by the Regents and Legislature, soon became apparent. On the 15th of May, 1811, the first Medical Commencement in the institution was held, and the degree of Doctor in Medicine granted to eight gentlemen, who had previously undergone the necessary examinations prescribed by its laws, and publicly defended their respective inaugural dissertations. This was a greater number of degrees in medicine than was ever before granted at one time in this city, since the establishment of a Medical School in New-York. The honours of the College were publicly conferred by the President, Dr. SAMUEL BARD, in the presence of the Chancellor and Regents of the University, the Trustees and other officers of the institution.

Important additions were made this year to the Chemical department of the College, the laboratory was rebuilt, and the chemical lecture-room materially improved. The fifth session of the College commenced on the first Monday of November, 1811. The business of the College was opened by an elegant and appropriate address from the president,* and the several professors entered with becoming spirit upon the duties belonging to their respective departments. The course of *Anatomy, Surgery, and Physiology* was delivered by Professor JOHN AUGUSTINE SMITH; *Chemistry*, both in its relation to medicine and the arts, was taught by Professor M'NEVEN; and the course of instruction on the *Theory and Practice of Physic and Clinical Medicine*, and on *Midwifery* and the *Diseases of Women and Children*, by Professor HOSACK. To this last mentioned branch, Professor HOSACK had, a short time previous, been appointed Lecturer by the Board of Trustees. The several branches of *Natu-*

* A copy of this excellent production, delivered by Dr. Bard, may be seen in the Amer. Med. and Phil. Reg. vol. ii. p. 369—372.

ral History were taught by Professor MITCHELL : the geological and mineralogical parts of the course were illustrated by the rich cabinet of fossils attached to the College, and the illustrations in *Botany* given at the State Botanic Garden. Lectures on the *Materia Medica* were delivered by the Vice President, Dr. DE WITT. The exertions of the Professors in their several branches of instruction were unremitting, and deserving the highest commendation : the result of their labours was highly advantageous and satisfactory to their pupils. On the practice of physic alone, upwards of one hundred lectures were given during the session by the professor of that branch.

At the commencement held on the first Tuesday in May following, the time appointed, twenty gentlemen received from the hands of the president the degree of Doctor in Medicine, eleven of whom had been regular students of the institution.

It is highly gratifying to observe the language in which the Regents of the University expressed themselves, when speaking of the condition of the College at this time :

“ They view (says the committee to whom was referred the business of the College) with satisfaction the advancement of the College to a greater degree of prosperity than it has at any time heretofore enjoyed. The names of the students reported, as attending the several classes, are eighty-four in number, which is a flattering indication of the continued progress of this Medical School. The President and Professors appear to have made great exertions to promote its welfare and permanent success ; and their zeal for the cultivation of medical science merits the approbation of the Regents.

“ The chemical and anatomical professorships, as they are attended with much expense to the incumbents, deserve, in the opinion of your committee, some aid and support from the Regents ; and it is proposed that the annuity of five hundred dollars, lately

granted by the legislature for the use of the college, should be appropriated for this necessary and important object."

In their annual report to the legislature, dated on the 27th of May, 1812, they also observe :

" The organization of the College of Physicians and Surgeons has been improved, and it now presents a fair prospect of speedily rising to a state of usefulness and celebrity, such as may be justly expected from the importance of the community in which it is situated, and the government under whose auspices it has been erected.

" A gentleman universally acknowledged among the first in the medical profession in America, has consented to be placed at the head of it, and professors of the best talents have been procured to deliver instruction in it."

The board of trustees of the College could not forbear to tender to their professional brethren their congratulations upon the successful establishment of the institution, and the salutary effects which resulted from its re-organization. This they did in their circular address of September, 1812, in which they briefly stated the flourishing condition of the College, and, at the same time, announced the several courses of Lectures intended to be delivered during the ensuing session.

The *sixth* session of the College commenced at the usual time, in November, 1812, and complete courses of Lectures on *Anatomy, Surgery, and Physiology*; on the *Theory and Practice of Physic and Clinical Medicine*; on *Obstetrics*, and the *Diseases of Women and Children*; and on *Chemistry*, were delivered by the respective professors of these branches. Arrangements having been made by the Professor of *Natural History* for delivering instruction to his class at a different season, the Lectures on *Geology, Mineralogy, Botany, and Zoology*, were given by Professor MITCHELL in the en-

suings spring. Sixty-one Lectures were delivered by the Professor of Natural History on these branches of education.

On the first Tuesday in May, 1813, the degree of Doctor in Medicine was conferred on five candidates, who had completed their education in the College, and to whom the Regents of the University had granted that honour.

The preceding sketch contains a concise and faithful relation of the principal circumstances connected with the origin and progress of the College of Physicians and Surgeons of New-York. It was considered unnecessary to offer a more minute detail, as the public at large would feel little interest in dwelling upon particulars of this kind; and it was deemed inexpedient to bring to light the transactions of individuals, who, instigated by disappointed ambition, or envious of the condition of the College, were not wanting in devising means to destroy its prospects, or to add to the many difficulties unavoidably connected with the organization of an institution of this nature. It has always been observed, that establishments for the promotion of science, like other associated bodies, have their intervals of languor as well as their periods of vigour and activity.

The College, having successfully encountered the evils which it had originally to contend with, it is believed, now stands on a foundation too firm to be shaken. Its re-organization in the year 1811, by the honourable the Regents of the University, has proved as salutary in its effects as the most sanguine could have promised. Though three years have not elapsed since that event, yet, so successfully have the labours of the College been directed, that those who have completed their education under its care, and have received its medical degrees, nearly equal, in point of number, all who before that time had received the same honour in this state. The Inaugural Dissertations published by the graduates of the University are also, for the most

part, highly honourable to the talents and acquirements of their respective authors, and reflect credit on the institution whence they received their education.

The present flourishing condition of the state Medical School cannot but be viewed with peculiar satisfaction by every friend of science and humanity; and the Board of Trustees, moreover, deeming themselves fully warranted on account of the munificent patronage of the legislature, and the laudable zeal of the Regents of the University, to augment the means of medical education afforded by the College, have recently adopted measures for that purpose. In pursuance of this object, they have appropriated a considerable part of their funds to the purchase of ground as a permanent situation for the College, and are engaged in completing an elegant and commodious edifice, in all respects commensurate with the increasing character and importance of the institution. The Board of Trustees have made such arrangements as will secure the completion of the work in due season, in order that the several professors may enter upon their respective duties at the usual time, the first Monday in November. Additional provision has lately been made to the anatomical and chemical departments of the College. It may also be proper here to state, that, at the close of the last session of the College, the Trustees appointed JOHN W. FRANCIS, M. D. Lecturer on the *Institutes of Medicine* and the *Materia Medica*.

When the advantages which New-York possesses for a great medical establishment are considered; advantages, arising from its natural situation; its extensive population, now nearly equal to most of the capitals of Europe; its large and well endowed hospital and other public charities; its botanic garden; its well organized Medical College, and the extensive system of education which it embraces; and when it is further considered, that these advantages are in-

creased by the munificent patronage of the state, it is not too much to say, that, in the means of instruction, the College of Physicians and Surgeons is second to no similar institution in the United States.

OFFICERS, &c. of the COLLEGE of PHYSICIANS and SURGEONS of the University of the State of New-York, 1813.

SAMUEL BARD, M. D. *President.*

BENJAMIN DE WITT, M. D. *Vice President.*

JOHN AUGUSTINE SMITH, M. D. *Professor of Anatomy, Surgery, and Physiology.*

DAVID HOSACK, M. D. *Professor of the Theory and Practice of Physic and Clinical Medicine, and Lecturer on Midwifery and the Diseases of Women and Children.*

WILLIAM JAMES M'NEVEN, M. D. *Professor of Chemistry.*

SAMUEL L. MITCHILL, M. D. *Professor of Natural History.*

JOHN W. FRANCIS, M. D. *Lecturer on the Institutes of Medicine and the Materia Medica.*

TRUSTEES.

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DAVID HOSACK,

ANDREW HUNT,

WILLIAM JAMES M'NEVEN,

ANDREW MORTON,

SAMUEL L. MITCHILL,

LYMAN SPALDING,

HUGH WILLIAMSON.

JOHN D. JAQUES, *Treasurer.*

JOHN W. FRANCIS, *Registrar.*

SYLLABUS of the SEVERAL COURSES of LECTURES delivered
in the COLLEGE of PHYSICIANS and SURGEONS, New-
York.

ANATOMY, SURGERY, AND PHYSIOLOGY.

The Lectures on *Anatomy, Surgery, and Physiology*, are embraced in one course, and are delivered by Professor JOHN AUGUSTINE SMITH, M. D. The objects of Dr. SMITH's labours are, consequently, threefold; to illustrate the anatomy of the human body, to present such physiological views of each part as necessarily arise from considering its peculiar nature and functions, and thence to make a pointed application of this knowledge to the important duties of the surgeon. This latter object is always regarded by the professor as one of primary consideration, and he, therefore, enters upon the duties belonging to his department, by pointing out the value and necessity of a thorough knowledge of the principles of surgery, the means by which that science is to be acquired, and the mode in which it is to be practised, both as it regards the surgeon himself, his fellow practitioners, and the community at large. The professor next takes up the consideration of *life*, its essential principle, as it has been called, and the phenomena by which it is characterized, particularly in the different classes of animals and vegetables. The laws which govern animate matter, and the various opinions which have been entertained relative to it, are stated and examined. Upon this subject, every argument is produced which tends to prove the existence of a distinct vital principle. To this naturally succeeds observations upon *death*, an examination into the character of inorganic matter, or matter deprived of animation, the vari-

ous causes by which death is produced, and the effects resulting therefrom.

As the continuance of existence appears to depend more immediately upon the circulation of the blood, than upon any other process of the animal economy, Professor SMITH next enters upon a consideration of the manner in which this fluid is formed. He states the several opinions which have been maintained concerning it, and details its sensible and chemical qualities as afforded by the latest experiments. The importance of this fluid is still further evinced, when the professor points out its relation to *secretion*, and examines the various substances formed from it.

Doctor SMITH next enters upon the consideration of *bone*, as one of the substances produced from the blood : its formation and growth, its structure and peculiar character, are related : the individual bones are then described, with their connections and particular uses. After the bones, the *muscles* are next demonstrated : their peculiar organization is unfolded, and the nature of muscular motion explained from the phenomena which it exhibits. What is usually denominated the vascular system, is then treated of : the great importance of a thorough knowledge of the arteries being universally admitted, the professor minutely illustrates the structure and course of the blood vessels. The process of *digestion* and *assimilation* (including the anatomy of the *chylipoietic* and other *viscera*) is next taken up, and this part of anatomical instruction concluded with a view of the *lymphatic* and *absorbent* systems.

Professor SMITH next commences with a view of the *organs of sense* ; having demonstrated the structure of the brain according to the manner adopted by the English, he proceeds to illustrate the anatomy of this organ agreeably to the improved method of the French. In his examination of the nervous system, Doctor SMITH endeavours, as far as

time will permit, to make his hearers acquainted with the most important facts which have been brought to light from the researches of philosophers on this subject.

In explaining the structure and functions of every part of the body, to the advantages afforded by oral instruction are added those which may be derived from a large collection of anatomical preparations and from dissections. The professor also frequently avails himself of the aid afforded by comparative anatomy, in order to illustrate particular subjects, and occasionally has recourse to preserved specimens of diseased parts for the purpose of more accurately unfolding the changes effected by morbid action.

From what has been already said, it will be understood that anatomy and physiology are intimately blended; the latter being deduced from the former. In like manner, the professor, while demonstrating the structure of a part, keeps constantly in view its functions, the diseases to which it is liable, and the operations and remedies they may require.

Correct anatomical knowledge being the basis of surgery, the professor dwells with minuteness upon those parts especially in which the skill of the surgeon is most required: Thus the anatomy and structure of the part is first particularly unfolded; the nature and seat of the diseases to which it is exposed explained; ample directions given for the manner of conducting the operation required; and the principles of surgery still further exemplified by performing the operation in the presence of the class upon the dead body. The professor treats at length all those subjects which claim the attention of the naval and military surgeon.

This course of Lectures commences on the first Monday of November, and continues *daily* for four months.

THEORY AND PRACTICE OF PHYSIC AND CLINICAL MEDICINE.

The *Theory and Practice of Physic and Clinical Medicine*, are delivered in the same course of Lectures, by DAVID HOSACK, M. D. the Professor of those branches.

Introductory to the practical subjects which this course embraces, and for the benefit of those pupils who may be commencing, or may have recently entered upon the study of medicine, Dr. HOSACK commences by exhibiting a compendious view of the structure of the human body ; more especially directing the attention of his pupils to the various functions it performs in a state of health, including those appertaining to the mind as well as the body.

In this view, particular attention is given to those functions which physiologists have denominated the natural functions of the system. Under this head, the various excretions, both as regards their influence in health, as well as the changes they undergo by disease, receive that attention which their importance demands.

The causes of disease, whether inherent in the system, or produced by the operation of external agents, are next enumerated.

The influence of climate, soil, food, sleep, cloathing, exercise, both mental and bodily, the passions of the mind, the functions peculiar to the different sexes, the various trades and occupations of life, in as far as they are either directly or indirectly the sources of disease, are severally noticed in this part of the course : as the subject of climate embraces circumstances equally interesting to the philosopher and physician, particular attention is given to the influence which it exerts upon the bodily and intellectual powers of man. In connection with this discussion, due regard is also paid to the sensible and adventitious qualities of

the atmosphere, and their agency in the production of endemic and epidemic disorders. Dr. Hosack next inquired how far the functions of the constitution possess in themselves the power of removing diseases, as ascribed to them by most of the ancient and by some modern physicians; and concludes the preliminary part of the course with an outline of that preparatory knowledge which it is necessary for the physician to possess when he approaches the bedside of the sick.

He next proceeds to a description of the various diseases to which the human frame is exposed, arranging the whole in such manner as he conceives best calculated to assist the student in acquiring a knowledge of the characters of each, the causes which produce them, and the means to be employed for their prevention and cure. With this view, Dr. Hosack distributes diseases into the eight following classes:

1. *Febres*, (Fevers) embracing the various forms of
Intermitting,
Remitting, and
Continued Fevers.
2. *Phlegmasiæ*, (Inflammations) containing all diseases of an inflammatory nature.
3. *Cutanei*, (diseases of the skin) in which all the cutaneous diseases are arranged agreeably to the orders adopted by Dr. Willan.
4. *Profluvia*, (discharges) including all hemorrhages, as well as the morbid discharges which take place from the excretory organs of the system.
5. *Suppressiones*, (suppressions) or those diseases which consist in a suppression or diminution of the natural evacuations.
6. *Neuroses*, (nervous diseases) embracing all those which more especially reside in the nervous system, including the various diseases of the mind as well as those of the body.

7 *Cachexiæ*, (vitiations) the diseases more peculiarly arising from a morbid condition of the fluids of the system; including those which arise from their redundancy either general or partial, as the various forms of dropsy, and those disorders which proceed from a vitiated state of the circulating mass.

8. *Locales*, (local diseases) containing tumours, dislocations, wounds, ulcers, and other diseases usually denominated local.*

Having pointed out the objects and advantages of this nosological arrangement, the professor proceeds to delineate the various diseases which it comprehends.

The subject of fevers, which fall under the daily observation of every practitioner, and which derives peculiar importance from the epidemics with which the United States have been visited since the year 1791, receives especial notice in this course.

When describing the treatment of diseases, Dr. Hosack not only minutely details the remedies to be prescribed, their mode of operation, and the different stages in which they are severally indicated, but the *diet* and *regimen* of the sick, including all those circumstances which have an influence upon the character of diseases and which it is equally the duty of the physician to direct, are also embraced in this course of Lectures.

MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

THIS course, as taught in the College of Physicians and Surgeons, not only embraces the delivery of women in child-bed, but comprehends the diseases peculiar to pregnancy,

* For a view of the details of Dr. Hosack's classification, see the Amer. Med. and Phil. Reg. vol. ii. p. 270. Its advantages will, on a future occasion, be pointed out by the author in a more extensive work on this subject.

those attendant upon parturition, those which succeed to delivery connected with the puerperal state, and the diseases of early infancy, especially those which occur during the month. The lectures on this important branch of medical education, are also delivered (at a separate hour) by the Professor of the Theory and Practice of Physic.

Dr. HOSACK commences this course with a description of the bones of the pelvis, noticing their form, situation, dimensions, connexions with each other, and the other parts of the body, including a comparative view of the dimensions and structure of the head of the *foetus* ; at the same time illustrating, by an extensive collection of preparations, the various deformities of the pelvis, and their effects upon labour. He next proceeds to a description of the soft parts connected with the pelvis, pointing out their structure, relative situation, connexion, the changes which take place in consequence of pregnancy, the vessels which supply them and the nerves which are distributed upon them, necessary to be known to the accoucheur.

Having described the anatomical structure both of the external and internal organs of generation, he notices their various functions, the diseases to which they are liable, and the treatment they severally demand. The numerous diseases connected with menstruation, are particularly treated of in this part of the course.

The gravid uterus, embracing a view of the changes induced by impregnation ; the signs of conception ; the structure and growth of the ovum ; the circulation of the *foetus*, and that which takes place between the mother and child, comes next under consideration. The changes produced in the system by pregnancy, the diseases attendant upon it, and their mode of treatment, including the premature expulsion of the *foetus*, and the treatment of those accidents which are frequently attendant upon abortion, are then fully detailed.

In the second part of the course, the premonitory signs of labour, the changes which take place during the process of parturition, and the diseases it occasionally produces, are next enumerated.

The several stages and progress of a natural labour; the different classes of labours, the characteristic symptoms of each, and their peculiar treatment, are then minutely described and illustrated upon the machine.

The regimen, or management of women in child-bed, the diseases which are frequently attendant upon, or succeed to parturition, and the diseases of the new-born infant, constitute the third part of the course.

The pupils are then referred to the New-York Lying-In Hospital, and the Lying-In Ward of the Alms-House, where they enjoy abundant opportunities of exemplifying, at the bed-side, the principles they may have acquired.

The Lectures on the Theory and Practice of Physic are delivered *daily* throughout the session, and those on Midwifery, at a separate hour, *three* times a week.

CHEMISTRY.

The Course of Lectures on *Chemistry* is delivered by Professor WILLIAM JAMES M'NEVEN, M. D.

Chemistry may be taught either by proceeding from the consideration of simple bodies to that of the combinations which they form, or else by deducing analytically, from the compound body, the more simple elements of which it consists. The former of those methods has been generally preferred from the time that so many simple substances were developed by means of the modern improvements in this science. It is also the method followed by the professor of this college.

If compound bodies be first presented to the examination of the learner, his progress is continually interrupted by his ignorance of all their constituent principles, on which, however, their mutual action and phenomena depend. But such of them as have not been decomposed are, according to the just logic of chemistry, to be deemed elementary for the present; and, in the stage to which it is now advanced, a clear and accurate demonstration of their properties necessarily forms the basis of the science. By considering these properties, first separately, and next in combination, a knowledge is acquired of the most complicated phenomena, not only with most facility and precision, but also with the advantage of having constantly in our view the effects of proportion and temperature, those predominating agents of all chemical changes.

Influenced, doubtless, by such considerations, the professor of chemistry first deems it proper to point out the active powers impressed generally upon matter, and then discriminates and exemplifies the nature of chemical action. The laws of affinity are followed by those of repulsion, and the forms of this power in electricity, galvanism, caloric, light, receive all the consideration necessary for demonstrating its most important phenomena during the production of chemical combinations.

The most simple confineable substance, and at the same time the most powerful chemical agent, comes next under examination, and the student is made acquainted with oxygen. Conformably to the mode adopted in this course, are first shown the combinations of oxygen with simple inflammable substances, the newly-discovered metals being selected for the first example. The metals have a primary interest for the persons who chiefly frequent those lectures, and at the same time this subject connects the finest discoveries of the moderns with the most improved part of ancient chemistry.

But a principal motive with the professor for the early introduction of this part of the matter of his lectures, and the adoption of this arrangement, arises from its reserving a great portion of the interest of pneumatic experiments to be diffused over the remoter parts of his course, when, perhaps the application of his auditors begins to slacken, and they have most need of being amused while they are instructed.

The consideration of the newly-discovered metals necessarily brings on that of the alkalis and earths, but though it is shown that these are metallic oxydes, yet since they have strong peculiarities, and are extremely active in their chemical agencies, it is thought advisable to preserve in some measure the ancient distinction, and consider them as a separate order in their power of neutralizing acids, and forming saline compounds.

Ammonia is connected with the metallic oxydes by containing oxygen, and is strictly connected with the alkalis by its properties; at the same time that, from the nature of its compound base, it introduces the consideration of other simple substances. These are nitrogen and hydrogen, of which the examination naturally succeeds.

The union of oxygen with nitrogen forms atmospheric air, of which the chemical and physical properties are now investigated. A varied proportion of the same elements produces other important combinations, such as the nitrous oxyde and the nitric acid, &c. The constituent principles of the metallic, alkaline, and earthy nitrates having been hitherto examined, the combinations themselves are at this period easily understood.

The union of oxygen with hydrogen forms water, and water is again resolved into its elements by various processes of nature and art. These important phenomena are detailed; the nature of congelation, fluidity, vaporization, and latent heat is then fully developed.

The union of oxygen with carbone, sulphur, phosphorus, &c. is productive of an highly important class of acids, and these enter into an equally important order of combinations. They now find their place in a connected series.

After those acids of well known composition are placed the muriatic, the fluoric, and boracic acids, on the constitution of which there hang as yet some doubts and uncertainty. But in all cases their combination with the substances already known is exhibited to the student.

The chemical physiology of vegetables opens a different, a new, and a very interesting field, as well to the philosophical chemist as to the student of medicine. In this, which may be called the second part of the course, their proximate principles and combinations are duly considered.

The examination of animal substances is reserved to the latter part of these lectures. It takes up the varieties of animal matter, their chemical properties and combinations: It treats of those animal functions which may be illustrated by chemistry, and it concludes with the spontaneous changes which animal bodies undergo.

OF THE GENERAL AGENTS OF CHEMICAL ACTION.

Of Chemical Attraction, and the Laws of Chemical Changes.

Of Repulsion.—Electrical repulsion and attraction, and their relation to chemical changes; galvanic repulsion and attraction, and their relation to chemical changes; calorific repulsion; temperature and the instruments for measuring it; expansion by caloric; specific caloric of bodies; quantity of caloric evolved by combustion; the motion and communication of caloric; the temperature of the atmosphere.

Of Light, and its operation in producing chemical changes.

Of Oxygen, and its combination with simple inflammable bodies.—1st. With the metals that produce alkalis.

With Potassium.—Methods of obtaining potassium; properties of potassium; hydrat of potassa; subcarbonate of potassa; methods of obtaining the hydrat and subcarbonate; experimental proofs of the properties of potassium and potassa.

With Sodium.—Methods of obtaining sodium; properties of sodium; pure soda; hydrat of soda; oxyde of sodium; subcarbonate of soda and their properties.

2d. The combination of oxygen with the metals that produce alkaline earths.

With Barium.—Methods of obtaining barium; baryta and hydrat of baryta; methods of obtaining hydrat of baryta; salts of baryta; barytic mixtures.

With Calcium.—Methods of obtaining calcium; properties of calcia and hydrat of calcia; causticity; preparation of mortar and cements; calcareous mixtures.

With Magnesium.—Method of obtaining magnesia; properties of magnesia; salts of magnesia; magnesian mixtures.

With Aluminum.—Method of obtaining alumina; properties of alumina; gems, pottery, porcelain, chinaware; aluminous mixtures.

With Silicum.—Method of obtaining silica; properties of silica; glass; silicious mixtures.

With Strontium.

With Zircanium.

With Ittrium.

With Glucinum.

3d. Of the combination of oxygen with the metals that produce oxydes.

Oxyde of Manganese, gray, black.—Mineralogical history of manganese; analysis of the ores of manganese; properties and uses of the oxyde of manganese; method of obtaining manganese.

Oxyde of Zinc, calamine.—Mineralogical history of zinc ; analysis of ores of zinc ; methods of obtaining zinc ; properties and economic uses of zinc ; medicinal uses of the oxyde and salts of zinc.

Oxyde of Tin, tin stone, wood-tin ore.—Mineralogical history of tin ; analysis of ores of tin ; method of obtaining tin ; properties and economic uses of tin ; medicinal uses of tin.

Oxyde of Iron ; magnetic iron stone, magnetical pyrites, loadstone, specular iron ore, hematites.—Mineralogical history of iron ; sulphurets of iron ; carburets of iron ; argillaceous iron ores ; analysis of ores of iron ; properties of iron ; properties of steel ; method of converting iron into steel ; economic uses of iron and steel ; medicinal uses and preparations of iron.

Oxyde of Copper, mountain blue.—Mineralogical history of copper ; analysis of ores of copper ; properties of copper ; economic uses of copper ; medicinal preparations and salts of copper.

Oxyde of Lead, red-lead ore.—Mineralogical history of lead ; analysis of ores of lead ; method of obtaining lead ; properties of lead ; medicinal preparations of lead.

Oxyde of Antimony, the gray ore.—Mineralogical history of antimony ; analysis of ores of antimony ; properties of antimony ; medicinal preparations of antimony.

Oxyde of Bismuth, bismuth ochre.—Mineralogical history of bismuth ; analysis of ores of bismuth ; properties of bismuth ; medicinal preparations of bismuth.

Oxyde of Cobalt, black cobalt ore.—Mineralogical history of cobalt ; analysis of ores of cobalt ; properties of cobalt ; economic uses of cobalt.

Oxyde of Mercury, native.—Mineralogical history of mercury ; analysis of ores of mercury ; properties of mercury ;

medicinal preparations of mercury; method of detecting mercurial poisons; economic uses of mercury.

Oxyde of Silver, calciform silver ore.—Mineralogical history of silver; extraction of silver; analysis of ores of silver; properties of silver; silvering; plating; method of separating silver from copper; medicinal preparations of silver.

Gold.—Mineralogical history of gold; analysis of ores of gold; properties of gold; gilding; plating; cupellation; medicinal preparations of gold.

Platina.—Mineralogical history of platina; properties and uses of platina; method of obtaining pure platina.

Tellurium.—Mineralogical history of, &c. The same of *Nickel*; *Uranium*; *Osmium*; *Tungsten*; *Titanium*; *Columbium*; *Cerium*; *Palladium*; *Iridium*; *Rhodium*.

4th. *Of the combination of oxygen with the metals that produce acids.*

Oxyde of Arsenic, native.—Mineralogical history of arsenic; analysis of ores of arsenic; properties of arsenic; method of detecting arsenical poison; medicinal preparations of arsenic.

Oxyde of Chrome.—Mineralogical history of chrome; analysis of ores of chrome; properties of chrome; chromates.

Molybdena, &c.

Of Oxygen in combination with hydrogen and nitrogen.

Ammonia.—Methods of obtaining ammonia; properties of ammonia.

Of Oxygen in combination with nitrogen only.—Atmospheric air; analysis of; its chemical and physical properties; nitrous gas; nitrous oxyde; nitric acid; eudiometry; nitrates.

Of Oxygen with hydrogen only.—Water, in the state of ice ; in the fluid state ; in the state of gas.

Of Oxygen in combination with carbon.—Carbonic oxide: carbonic acid ; carbonates.

Of Oxygen in combination with sulphur.—Sulphurous oxide ; sulphurous acid ; sulphuric acid ; sulphates ; sulphites ; sulphurets ; sulphuric æther.

Of Oxygen in combination with phosphorus.—Phosphorus acid ; phosphoric acid ; phosphates ; phosphites ; phosphurets.

Of Hydrogen, and its combination with simple inflammables.

Of Hydrogen in combination with carbon.—Olefiant gas ; carburated hydrogen.

Of Hydrogen in combination with sulphur.—Sulphurated hydrogen ; hydrosulphurets ; supersulphurated hydrogen, and its compounds.

Of Hydrogen in combination with phosphorus.—Phosphorated hydrogen gas.

Of Muriatic Acid.—Muriates ; metallic, alkaline, earthy.

Of Chlorine.—Hyperoxymuriates ; alkaline, earthy, bleaching.

Of Fluoric Acid.—Fluates ; metallic, alkaline, earthy.

Of Boracic Acid.—Borates ; metallic, alkaline, earthy.

Of the Chemical Physiology of Vegetables.

Of Vegetation.—Germination ; the food of plants ; motion of the sap ; functions of the leaves.

Of the proximate principles of Vegetables.—Of gum ; of fecula ; sugar ; honey ; gluten ; gelatine ; caoutchouc ; birdlime ; wax ; fixed oil ; volatile oil ; camphor ; resin ; gum-resin ; balsam ; extract.

Of Tannin.—Preparation of tannin ; combination of tannin with gelatin ;—tanning ;—with alkalis ; with earths ; with oxydes ; with acids ; species of tannin.

Of Gallic Acid.—Preparation of gallic acid ; properties of gallic acid ; gallates.

Of Prussic Acid.—Preparation of prussic acid ; properties of prussic acid ; prussiates.

Of Citric Acid.—Preparation of citric acid ; properties of citrid acid ; citrates.

Of Malic Acid.—Preparation of malic acid ; properties of malic acid ; malates.

Of Oxalic Acid.—Preparation of oxalic acid ; properties of oxalic acid ; oxalates.

Of Tartaric Acid.—Preparation of tartaric acid ; properties of tartaric acid ; tartrites.

Of Acetic Acid.—Preparation of acetic acid ; properties of acetic acid ; medicated vinegars ; acetites ; acetic æther.

Of the formation of Animal Substances, and of Animal Products.—Of the blood ; of the chyle ; of the lymph, saliva, pancreatic and gastric fluids ; of the bile and biliary calculi ; of urine, urea, and urinary calculi ; of fibrin ; of skin, celular fibre, membrane, tendon, ligament, cartilage, bone, and shell.

Of the Functions of Animals.—Of digestion ; of respiration ; of assimilation ; of the decomposition of animal bodies.

The Lectures on Chemistry are delivered four times a week throughout the session.

NATURAL HISTORY.

THE subjects of this extensive course are divided by Professor MITCHILL into distinct heads, after the following arrangement : He begins with the history of the earth, as a planet or integrant portion of the universe. I. It is divided into four parts : 1. *Cosmogony*, embracing the doctrines relative to the origin of the world. 2. *Geognosy*, or the account of the changes it has undergone in the chaotic state,

during the deluge, and since that event. Its constituent parts viewed under five divisions ; (a) *Primæval*, or such as were formed at the creation, or deposited from chaos immediately after, such as syenite, topaz-rock, quartz-rock, primitive flint, slate granite, gneiss, micaceous slate, argillaceous slate, serpentine, with primitive lime-stone, gypsum, and trapp. (b) *Transition*, or such as were formed when a further subsidence from the original medley of things took place, of which, transition-lime-stone and trapp, gray wacke, flinty slate, and transition gypsum, are examples : (c) *Flat or secondary*, to wit, sand-stone, low stratified lime-stone, gypsum and trapp, rock-salt, chalk, and coal : (d) *Alluvial*, formed more recently still by settlement from water, constituting the bottoms of valleys and level spaces between mountains, as well as the chief constituents of widely extended plains. (e) *Volcanic*, or the products of subterraneous fire, comprehending lava, slag, ashes, scorixæ, &c. In this arrangement, he follows the system of the distinguished German, Professor WERNER. He is a firm Neptunian, and examines at great length, the operation of water in giving configuration of the globe. 3. *Mineralogical Chemistry*, or an explanation of the properties of matter, attractive and repulsive, by which its different forms and modifications are effected. 4. *Physical Geography*, or an account of the actual condition of the globe, as to land and water, mountain and valley, continent and island, mine and surface. This section of the course is denominated *Geology*.

II. The history of *light*, as the most copious of created existences, and occupying the widest space in the universe. It is considered as a body rendered fluid by means of heat or caloric, like other bodies, and like them, giving out its heat on its decomposition. A review is given of the modern discoveries by Bancroft, Herschell, Ritter, and Wollaston, rendering it necessary to enlarge and reform the doctrines

of Newton, and inclining him to the belief, that the sun-beam consists of two ingredients, *colour* and *caloric*. Hence is deduced a theory of colour and heat as evolved from light by its decomposition, and imparting to every thing its proper hue and temperature. White is considered a chemical, and black a mechanical assemblage of all colours ; and Rumford's considerations on the black clothing, furs and skins of animals, and on the black coating of other bodies in relation to heat, are exhibited to strengthen this argument. The analogy between light and sound is traced, to show the doctrine embraced by some, that impulse or vibration may be of great efficacy in bringing about the phenomena of light. This part of the course is termed *Photology*.

III. Heat is next considered, and its natural history attempted. A great source of it is the sun-beam, or chemical compound of colour and light. Another copious source of it is the oxygenous fluid of the atmosphere, or phos-oxygenous gas as it ought to be called. If the sun-beam becomes associated with oxygen, it forms the compound, erroneously called oxygenous air. It is really a solution of oxygen in fluid light, and on the resolution of this compound into its constituent parts, heat, light, oxygen and colour come forth. After considering the mechanical and chemical theories of fire, a preference is given to Pictet's arrangement of the facts under four heads, to wit, the free, latent, specific, and fixed forms of heat. Its effects are considered as producing contraction, expansion, liquidity, fluidity, fusion, and as the great stimulus to vegetable and animal life. The plutonic hypothesis is examined and rejected. This branch of the course is called *Pyrology*.

IV. The history of water is the next subject of Professor MITCHILL's discussion. It is the great agent in effecting the changes the earth has undergone. The proofs are stated of its having covered the mountains, and of its separation

from the materials with which it was anciently blended, forming thereby the stratification illustrated under the head of Geology. Reasons for supposing the waters of the globe to have undergone a diminution ; 1. In the formation of crystalline bodies ; 2. In the constitution of the atmosphere ; 3. In the formation of plants ; and, 4. In the organization of animals. By these processes, an immensity of the water which existed at the flood is converted into solid forms, and a correspondent shrinking of the ocean has ensued. In these natural and easy ways, is the problem solved, which the ingenious Jamieson gives up in despair, that is, what has become of the surplus water that once deluged the world ? The primitive inundation having thus subsided, the question is examined, whether the quantity of water is yet diminishing, as some of the modern philosophers think ; considerations are offered in favour of such a belief, in consequence whereof, preparation is making for the final consummation of terrestrial affairs by fire. Waters apparently rushed from the south, according to Kirwan's doctrine. Questionable whether water can be decomposed as the fashionable chemists think, and whether it is not an element, as the ancients and Priestley contended. It is divisible into three historical section. 1. Salt water, such as saline or briny fountains, the ocean, the Mediterranean, Euxine, Caspian, and Judean seas ; and the Nitrian and Mexican lakes. 2. Fresh water, such as the fluid of rain, dew, snow, and hail ; spring or fountain water ; river water, and the liquid of the great American lakes, as well as of many more inland collections of water. 3. Mineral water, such as the acidulous springs of Ballstown, charged with carbonic acid ; the sulphureous springs of Clifton, in Ontario county, exhaling hepatic gas, and depositing brimstone ; the thermous springs of Lebanon, which are of a temperature fitting them for an exquisite bath ; the chalybeate springs of many places in our granite coun-

try. These inquiries, with a multitude of explanations concerning tides, currents, alluvions, and solutions, are distinguished by the title of *Hydrology*.

V. The globe having been thus viewed, as to its geological structure, the effects wrought upon it by light, heat, and colours, and lastly, in respect to the alterations it has sustained by means of water, the next view taken of it relates to its atmosphere. The idea of Lavoisier is here adopted, that every thing which the heat of its surface can convert to air or gas, makes a portion of the sphere of vapours encircling our planet. The views of Professor MITCHILL, relative to the atmosphere, with a theory of the winds, and an abundance of other particulars, are summed up under the name of *Aerology*.

VI. *Mineralogy* is the sixth division of the subject, and comprehends the classification and particular description of those substances that were mentioned in a general and comprehensive way, under the head of *Geology*. On account of the very recent discoveries, which have enriched and ennobled science, Professor MITCHILL has found himself obliged to discard the quadruple arrangement of minerals, by Bergman, into earths, metals, salts, and inflammables. Although this distribution had received the respectable sanction of Cronstedt, Magellan, Kirwan, and the chief of the modern worthies who have cultivated an acquaintance with fossils, yet its incompatibility with the present state of facts and observations render it absolutely improper to adhere to it any longer. That fourfold classification, was the most scientific and luminous that had been thought of, and was well worthy of the fond reception it met with. But it is now time to change it for a better ; for one which is framed and erected on the actual relations of minerals, as now understood. The arrangement he proposes is grounded on his own views of this department of knowledge, and on the

penetrating discoveries of Professor Davy. The prominent features of these joint and concurring testimonies are, the relations which mineral, and especially metallic bodies, have to *Phlogiston*, and to *Oxygen*: to which may be added, their relations to *Sulphur*, to each other, and to *Acids*.

1. The first class comprehends minerals, as combined with phlogiston, (or hydrogen.) Among these are the metals in their *reduced state*, as it is termed; that is, the one in which they possess splendour, malleability, and ductility: sulphur, in its ordinary condition; coal, when affording flame as it consumes; phosphorus, when burning with blaze: among the metals, it is proper to observe, that potash, soda, ammoniac, lime, barytes, magnesia, alumine, and silex, are reckoned, as well as the substances heretofore ranked as metals.

2. In the second class are contained minerals, as combined with oxygen. All *metallic oxyds and acids* are comprehended in this division; such as those of lead, iron, &c. as commonly received, and likewise, the alkaline salts and earths, argillaceous and siliceous earths, &c. in their states wherein they commonly exist, making the principal and solid materials of the globe. Modern science has demonstrated that these are chiefly metallic oxyds. The oxyds of carbone come under this head; including all the modifications of incombustible coal.

3. Minerals united to sulphur, make the third class; constituting all manner of pyritical combinations; all sulphure and sulphurets; and in short, every one of the numerous combinations, denominated *Ores*, by intervention of brimstone.

4. *Amalgams and Alloys* form the fourth class of mineral bodies. They comprehend all the mixtures of metallic substances with each other. Thus glass is an alloy of two metals, potash and flint; stone-ware an alloy of clay, flint, and iron, under other modifications; and the like applies to bricks,

tiles, and other mixtures, heretofore deemed earths, but now shown to be metals. All the alloys of the metals, as usually understood, such as the mixtures of gold and silver, &c. with copper, mercury &c. come under this head, of course.

5. Minerals, as related to acids, make a fifth class. Of these, the acetates of lead and copper, forming the saccharum saturni, and verdigris of the shops, are examples; as are also the sulphates of iron, zinc, lime, barytes, soda, potash, and in short the entire section of the salia acido-metallica.

VII. *Botany* is the next division of this course. It comprises all the vegetables which overspread the face of the earth, under two great aspects. 1. Their history as individuals of the animated creation, including their origin from seeds and germs, through the whole of their increase to their inflorescence and fructification, and the formation of seeds and germs again. This comprehends their anatomical, physiological, pathological, and economical character and uses. 2. Their Classification; which being explained according to the Sexual or Linnæan arrangement, is too well understood to be here enlarged upon. In his illustrations of this part of the course, the professor avails himself of the advantages afforded by the State Botanic Garden.

VIII. In his *Zoology*, Professor MITCHILL follows the plan of Cuvier, as explained and detailed by Dumeril. The distribution of the animal race into the nine classes of Mammalia, birds, reptiles, fishes, molluscas, crustacea, insects, worms, and zoophytes, seemed preferable to any other, because it embraces both their anatomical structure and their external characters. For, by thus seizing all the points of resemblance which the outward form and inward organization afford, animals of similar natures may be grouped together; while by noting all the circumstances of discrimination, that external and internal marks present, the creatures of dissimilar configuration and appearance may be kept asunder.

In this copious and fertile field of discussion, the human race is considered. He distributes the single species, man, as descended from the first original pair, into six races: 1. The Caucasian or European. 2. Hyperborean or Laplander. 3. The Mongol or Tartar. 4. The American; that is, the South American. 5. The Malay or Philippine; and 6. The Ethiopian or Negro. As to the Aborigines of North America, he considers them as composed chiefly of two races: the Hyperborean, No. 2. which came in by the route of Greenland, and the arctic regions from the east: and of the Tartar, No. 3. which entered by the way of Alaska, from the west. And he supposes that the genuine American form and feature, are only to be found in the south.

IX. The ninth and last division of this course, is termed *Uranology*. As in the former sections, terrestrial objects are treated of at great length; so in this, it is intended to exhibit what is known of the Heavens. It is comprehended under three heads, to wit: 1. The history of the Copernican system; comprehending the sun, the planets, satellites, asteroids, and comets: 2. An account of the sidereal system, or of the fixed stars which constitute the celestial firmament, of worlds innumerable, distributed through immeasurable space, according to Herschell's researches: and, 3. The way in which stars were, among the pastoral tribes of Asia, parcelled into constellations; and particularly how, for the purpose of tracing and describing in a clearer manner the sun's course along the ecliptic, the zodiac was invented. Dr. MITCHILL concludes with the history of the twelve signs; and professes his endeavour to infuse in his discourses, as much as he possibly can, of the spirit which animates the writings of Ray, Derham, Smellie, Fontenelle, Pluche, and Saint Pierre.

The Lectures on Natural History, commence the beginning of May, and are delivered *daily* for nearly three months.

CHARTER OF THE COLLEGE.

WHEREAS since the establishment of the COLLEGE OF PHYSICIANS AND SURGEONS, of this state, by charter, dated March the twelfth, one thousand eight hundred and seven, it has been found necessary at several times to alter and amend the said charter: *And whereas* it has now become expedient for the better government of the said College to collect into one, the original and supplementary charters, and to amend the same so as to give greater stability and respectability to that institution; *Therefore be it ordained*, by virtue of the act, entitled, "An Act to enable the Regents of the University to establish a COLLEGE OF PHYSICIANS AND SURGEONS within this state," passed the 24th of March, 1791, and we do by these presents ordain, grant, and declare, That all such persons named in the original charter, who did, according to an ordinance passed by us the Regents of the University of the state of New-York on the 3d day of March, 1803, declare in writing, (on or before the first day of May, in the year 1803,) their acceptance of the appointment of member or trustee of the said College; and that they would each of them, to the best of their abilities, endeavour to promote the usefulness of the said College, and faithfully execute the duties required of them respectively as members or trustees of the said College, together with *Samuel Bard, Benjamin De Witt, John Augustine Smith, David Hosack, William James M'Neven, Samuel L. Mitchell, John D. Jaques, Thomas Addis Emmet, Lyman Spalding, Andrew Morton, Andrew Hunt, and Joseph Bloodgood*, be, and hereby are constituted a body corporate and politic, in fact and in name, by the name of the "COLLEGE OF PHYSICIANS AND SURGEONS in the city of New-York." And that they and their successors shall have perpetual succession, and by that name shall be in law capable to sue and be sued, plead, and be impleaded, answer and be answered unto, defend and be defended in all courts and places, and in all matters and causes whatsoever; and to purchase, take, hold, and enjoy, and have lands, tenements and hereditaments, and real estate in fee simple or for term of years, or lives, or any other manner whatsoever; and also goods, chattels, books, money and all other things of what na-

ture soever : *Provided always*, that such estate, as well real as personal, which the said College is and hereby are authorized to hold, shall not exceed the sum of one hundred and fifty thousand dollars, current money of this state ; and that the members or trustees of the said College shall have a common seal, and may alter and renew the same at pleasure. *And be it further ordained*, granted, and declared, that *Samuel Bard, Benjamin De Witt, John Augustine Smith, David Hosack, William James McNeven, Samuel L. Mitchill, John D. Jaques, Thomas Addis Emmet, Lyman Spalding, Andrew Morton, Andrew Hunt, and Joseph Bloodgood*, and such other persons as we or our successors may hereafter appoint, *provided* the whole number shall not at any time exceed twenty-five, shall be trustees of the said COLLEGE OF PHYSICIANS AND SURGEONS, and that a majority of their whole number at any time resident in the city of New-York, shall form a quorum for the transaction of business, and shall and may meet together on the first Tuesday in May, and on the first Tuesdays in August, November and February in every year, and that on the days of these anniversary and quarterly meetings, but at no other time, they, the said trustees, may enact such by-laws, rules and regulations relative to the affairs and property of the said College, and relative to the duties of their president, vice-president, professors, treasurer, registrar, and other members as they, or a majority of them so met at such annual or quarterly meetings, may think fit and proper : *Provided*, that such by-laws, rules and regulations be not contrary to, or inconsistent with the constitution and laws of this state or the United States ; and such by-laws, rules, and regulations, having first received our consent and approbation, and confirmation, shall be and remain the by-laws, rules, and regulations by which the said College shall be governed, and shall not be annulled, abrogated, or repealed but by and with the consent of the majority of the trustees of the said College, and by and with the approbation of us the said Regents. And the Registrar of the said College shall provide a book in which he shall make an entry of all the resolutions and proceedings which may be had from time to time, and also the annual reports relative to the state of the treasury.

and all such other things as a majority of the trustees of the College assembled, shall think proper ; to which any member of the College may at any time have recourse : and the same, together with all books, papers, and records which may be in the hands of the registrar, and be the property of the College, shall be delivered to his successor in office. And the treasurer of the said College shall receive and be accountable for all monies which shall come into his hands, and shall pay the same in such manner as may be directed by a majority of the board of trustees, convened at their anniversary or quarterly meetings, and by a warrant for that purpose signed by the president or vice-president. *And be it hereby further ordained*, granted, and declared by us, that the trustees of the said College shall, as far as they are able at all times, provide suitable apartments or lecturing rooms for all such professors as shall hereafter be appointed by us in and for the said College, which Professors shall have the stile and title of Professors of the University of the state of New-York, for the COLLEGE OF PHYSICIANS AND SURGEONS : and that all the members of the said College shall be privileged at all times to attend, inspect, and notice all lectures or other modes of teaching by Professors in the said College, appointed by us ; and that in case of the death, or resignation of any professorship, or other vacancy in the said College, a majority of the trustees, at any of their meetings, may appoint lecturers in any branch of medicine, or of the sciences connected therewith, until such time as our pleasure be known respecting the same, or a professor be appointed by us. *And be it hereby further ordained*, granted, and declared, that the board of trustees of the said College, as well as the subordinate board of President and Professors, shall carry and put into effect all our ordinances respecting the said College, as well with respect to education as all other matters and things, and shall pay due attention to establishing and preserving, for the use of the said College, an anatomical museum, chemical apparatus, and botanical garden, and shall make an annual report to us in writing, or to the Chancellor of the University, in the month of January, in every year, respecting the funds and property of the said College, and all matters and things relative

to the said College and the Students and Professors thereof. *And be it further ordained*, That the President or Vice-President, or in the absence of both, the senior Professors, and any three of the trustees, may at any time call a meeting of the trustees of the said College for the transaction of ordinary business, by giving in writing, to each trustee, who shall be in the city of New-York, three days notice of the time and place of holding the said meeting; and that five of the said trustees so met, (of which the President, Vice-President, or senior Professor shall always be one,) shall be a quorum. *And be it further ordained*, That *Samuel Bard*, M. D. shall be President of the said College; and that *Benjamin De Witt*, M. D. shall be Vice-President; and that *John Augustine Smith*, M. D. shall be Professor of Anatomy, Surgery, and Physiology; and that *David Hosack*, M. D. shall be Professor of the Theory and Practice of Physic and Clinical Medicine; and that *William James M'Neven*, M. D. shall be Professor of Chemistry; and that *Samuel L. Mitchill*, M. D. shall be Professor of Natural History; and that *John D. Jaques*, shall be Treasurer; and that *John W. Francis*, M. D. shall be Registrar of the said College, and accordingly they are hereby respectively appointed to the stations and offices as annexed to their names. *And we do further ordain*, give, and grant to the said College, that we will constitute and appoint no new Professorship in the said College, or abrogate or annul any of the present Professorships, nor remove either of the Professors of the said College now appointed or to be hereafter appointed, until notice shall have been given to the board of trustees of such intended new appointment, or abrogation, or to the person intended to be removed, of such intended removal, at least one month before such intention shall be carried into effect. *And be it further ordained*, That it shall be the duty of the President and Professors of the University for the COLLEGE OF PHYSICIANS AND SURGEONS, at any ordinary meetings appointed for that express purpose, and of which meeting the trustees of the said College shall have notice and may attend, to examine all candidates for the degree of Doctor of Medicine in the said College, and to recommend from time to time such students as a majority of the trustees present shall deem qualified and worthy to receive the

degree of Doctor of Medicine. And the Regents do hereby give and grant to the said College, that they will take into consideration the propriety of granting diplomas, for conferring the degree of Doctor of Medicine upon such students as shall be so recommended, and to none other of the students of the said College. Finally, *We do ordain*, grant, and declare, that the said trustees, fellows, and members of the COLLEGE OF PHYSICIANS AND SURGEONS in the city of New-York, and their successors forever, shall enjoy all the corporate rights, privileges, and immunities which are hereby granted: And that the by-laws, ordinances, and regulations heretofore passed by us, and ordained, and which not having been repealed, and which are not repealed by this charter, but are now in force, shall continue to be the by-laws, ordinances, and regulations for the government of the said College, until they shall be repealed, or new ones ordained, according to the tenor and ordinances of this charter; and all other laws, ordinances, and regulations, and all former charters or supplementary charters granted by us to the said COLLEGE OF PHYSICIANS AND SURGEONS are hereby repealed.

And be it further ordained, That the members of the said College, who are not by this charter constituted trustees, shall be Fellows, and that the trustees shall have power to elect fellows or members of the said College, who shall at all times have the privilege of attending all the public lectures and other courses of instruction delivered by the Professors in the said College, and who shall also have the privilege of visiting and inspecting the anatomical museum, the botanic garden, the cabinets of mineralogy and natural history and the library of the said College, under such regulations as the trustees shall prescribe for that purpose.

IN testimony whereof, we have caused our common seal to be affixed to these presents, the fourth day of June, in the year of our Lord one thousand eight hundred and twelve.

(Signed)

DANIEL D. TOMPKINS,
Chancellor of the University.

FR. BLOODGOOD, Secretary.

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